

# Notice of Allowability

Application No.

09/453,055

Examiner

Jeff H. Aftergut

Applicant(s)

YAMAGUCHI ET AL.

Art Unit

1733

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## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12-22-03.
2. ☒ The allowed claim(s) is/are 2, 16, 17 and 24-29.
3. ☒ The drawings filed on 02 December 1999 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

Jeff H. Aftergut  
Primary Examiner  
Art Unit: 1733

### REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: None of the prior art of record taught or suggested that those skilled in the art would have employed a thermosetting sealing material consisting of thermosetting resin film and glass microspheres wherein the hardening of the sealing material took place by heating the sealing material to the curing temperature at a rate of 1 degree C per minute or less (claim 2). While there were advantages cited in the art for the use of microspheres in thermosetting resin as opposed to the use of prepreg materials, those references which suggested such advantages did not incorporate the microsphere layers alone (without prepreg layers) and additionally failed to express the specific rate of heating for the curing of the sealing layers. The prior art of record additionally failed to teach the use of a plurality of epoxy resin films and a carrier material used as an adhesive film placed between the epoxy resin films as well as the hardening of the sealing material by heating to the curing temperature at a rate of 1 degree C or less per minute (claim 24). It should be noted that Cundiff suggested only two layers of material for the sealing material and there was no carrier layer disposed between the same. Additionally, the newly cited reference to EP 786,330 taught the use of a carrier adhesive film (the resin moisture barrier film 3), however the reference did not apply an adhesive to both sides of this resin moisture barrier material. Again the exclusion of fibrous prepreg materials is suggested by claim 24, which was not envisioned by the prior art. Regarding claim 26, none of the prior art suggested a sealing material which consisted of epoxy resin adhesive films with an epoxy resin film placed between the epoxy resin films (i.e. at least three epoxy resin films) where the sealing material was hardened by heating to the curing temperature at a rate of 1 degree C or less per minute. Regarding claim 28, none of the prior art

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suggested a sealing material which consisted of three epoxy resin adhesive films where the sealing material was hardened by heating to the curing temperature at a rate of 1 degree C or less per minute.

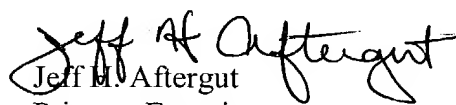
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jeff M. Aftergut  
Primary Examiner  
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February 2, 2004